



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,918	12/14/2004	Joachim Wilhelm Hellmig	NL 020529	8895

24737 7590 03/15/2006

PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER

RIVERO, MINERVA

ART UNIT	PAPER NUMBER
----------	--------------

2655

DATE MAILED: 03/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/517,918	Applicant(s) HELLMIG, JOACHIM WILHELM	
	Examiner Minerva Rivero	Art Unit 2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-8 and 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Dekker (US 2002/0003762).
3. Regarding claims 1 and 11, Dekker discloses a recording device for and method of recording marks representing data in an information layer of a record carrier by irradiating the information layer by means of a pulsed radiation beam, each mark being written by a sequence of pulses ([0001]), the recorded marks being erasable by irradiating the information layer with an erase radiation beam (*erase step*, [0001]), characterized in that said erase radiation beam has a first erase power level for a first erase period (*Pe (after pulse sequence 13)*) during a first $\frac{1}{2}$ T1 segment, see Fig. 1A and 1B, pulse sequence 14), a second erase power level higher than or equal to said first erase power level for a second erase period (*Pe during a second $\frac{1}{2}$ T1 segment*, see Fig. 1A and 1B, pulse sequence 14), and a third power level lower than said second

Art Unit: 2655

erase power level for a third erase period (P1 during two $\frac{1}{2}$ T1 segments, prior to Pw, Fig. 1A, and P2 during two $\frac{1}{2}$ T1 segments, prior to Pw, Fig. 1B; *variable bias power level*, [0010]).

4. Regarding claims 2 and 12, Dekker discloses said third erase power is lower than said first erase power (Fig. 1, given 3rd erase power level at 1st $\frac{1}{2}$ T1 segment is lower than P2 is lower than Pe, given that the 1st erase period is bottom pulse at P2 and the 2nd erase period is top pulse at Pe).

5. Regarding claims 3 and 13, Dekker discloses said first erase power level and said third erase power level are substantially equal and lower than said second erase power level (see Fig. 1, 1st and 3rd erase periods are bottom pulses at P2 and 2nd erase period is top pulse at Pe).

6. Regarding claim 4, Dekker discloses said second erase power level is lower than the write power level (w) of said pulses of said radiation beam for recording marks ([0003], Lines 5-8).

7. Regarding claim 5, Dekker discloses said third erase power level is higher than the bias power level (b) between said pulses of said pulsed radiation beam for recording marks (P1 and P2 are higher than the bias power in writing pulse sequence 13, see Figs. 1A and 1B).

Art Unit: 2655

8. Regarding claim 6, Dekker discloses said first erase period and said second erase period are shorter than said third erase period (P_e during a first and second $\frac{1}{2} T_1$ segments, P_1 and P_2 occur during a T_1 segment prior to P_w , Figs. 1A and 1B).

9. Regarding claim 7, Dekker discloses the sum of said first erase period and said second erase period is shorter than half the shortest mark being recorded (mark length is $4T_1$, first and second erase periods total T_1 , Figs. 1A and 1B).

10. Regarding claim 8, Dekker discloses said information layer has a phase which is reversibly changeable between a crystal phase and an amorphous phase ([0002], Lines 4-6).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dekker (US 2002/0003762) in view of Nagata *et al.* (US 6,456,584).

Art Unit: 2655

13. Regarding claims 9 and 10, Dekker does not disclose but Nagata *et al.* do disclose said record carrier comprises at least two information layers (Col. 3, lines 51-59) and at least one of said two information layers is at least partially transparent layer (Col. 4, Lines 44-45).

Therefore it would have been obvious to one ordinarily skilled in the art at the time of the invention to supplement the teachings of Dekker by having said record carrier comprise at least two information layers, and having at least one of said two information layers be at least partially transparent layer, as disclosed by Nagata *et al.*, in order to achieve a higher recording density in the optical disk, and to enable retrieval of the contents in the deeper information layer of the medium.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Takada *et al.* (US 5,848,043) disclose a laser-power modulating scheme depending on a linear velocity of a phase-change disc.

Ohno (US 6,424,610) disclose a recording method for a rewritable optical recording medium, which facilitates forming and erasing of amorphous marks in a phase-change recording medium devoid of a reflective layer.


Furumiya *et al.* (US Patent 6,894,965) disclose a recording method in which a length of a mark and a preceding space are used to determine a recording laser power.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minerva Rivero whose telephone number is (571) 272-7626. The examiner can normally be reached on Monday-Friday 9:00 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571) 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MR 2/28/06



WAYNE YOUNG
SUPERVISORY PATENT EXAMINER